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Special Energy Issue

FISCAL NOTES

A Monthly Review of the Texas Economy from the Office of Susan Combs, Texas Comptroller of Public Accounts

MARCH REVENUE (IN MILLIONS): SALES TAX: $1,652.8 OIL PRODUCTION: $106.6 NATURAL GAS: $190.8 MOTOR FUELS: $248.0 MOTOR VEHICLE SALES: $271.1 TOBACCO: $113.7

A New Day for Energy

Reliable and affordable energy is critical to our state's ability to maintain strong economic growth. Texas has long been a leader in the energy industry and today has nearly one-fourth of the nation's oil reserves and about one-third of its natural gas reserves. Texas also leads the nation with more than a quarter of all U.S. refining capacity.

The Texas energy industry employs nearly 375,000 people who earned total wages of more than $35 billion in 2006.

The world almost certainly will meet future energy demands using a wide variety of resources, and our state is well positioned to benefit from diversification of the nation's energy profile.

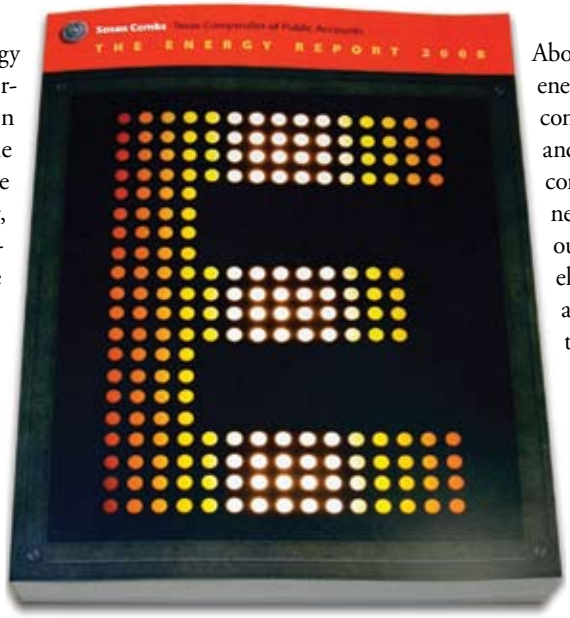
This issue of *Fiscal Notes* celebrates publication of *The Energy Report*, available at *www.window.state.tx.us/specialrpt/energy*. The report—and this issue of *Fiscal Notes*—are intended to serve as reference tools for anyone seeking to understand the current Texas energy landscape.

Sincerely,

Susan Combs
Comptroller of Public Accounts

The Texas Portfolio

Profiling options discussed in the Comptroller's Energy Report



A plentiful energy supply is a cornerstone of modern life. It's also the factor that, more than any other, made Texas an important part of the world economy.

For much of the twentieth century, Texas' economy was driven by the oil and gas industry. At the height of the oil boom of the early 1980s, the industry accounted for more than a quarter of the gross state product and of state government revenues. Though the state's economy has diversified over the last 25 years, the industry is still important to our welfare, and has seen a recent resurgence due to rising oil and gas prices.

Today, Texas is the nation's largest consumer of energy, accounting for nearly 12 percent of all U.S. energy use, primarily due to our fierce summers, the state's large industrial complex and our large population. Texas is the nation's largest producer of energy as well. About nine-tenths of the energy Texas produces comes from oil, gas, coal and nuclear power, all considered to be nonrenewable resources. But our reserves of fossil fuels are becoming harder and more expensive to find.

To meet our energy needs in the 21st century, Texas—and the rest of the world, for that matter—will have to rely on an array of resources. The state's new energy portfolio will include renewable resources, nuclear power and traditional fossil fuels linked with new technologies to improve efficiency and reduce their environmental impact.

To help Texans weigh these options, the Comptroller's office has created a comprehensive study, *The Energy Report*, which examines the energy options and opportunities facing our state in the new century. Comptroller analysts have assessed the availability, benefits and liabilities of a number of energy options that can continue to fuel our economy.

CONTINUED PAGE 10

by **Tracey Lamphere**

Texas Becoming a Nuclear Powerhouse

Expansions on the horizon for South Texas Project, Comanche Peak

Texas' bond with nuclear power is strong and expected to strengthen in the next decade. In the next two years, the U.S. Nuclear Regulatory Commission (NRC) could receive applications for two more reactors at Comanche Peak, near Glen Rose, and four more at two new sites in Texas. The South Texas Project (STP) has already submitted an application for expansion of its Matagorda County facility. Prior to that, no new applications had been submitted to the NRC for 29 years.

Strength in Numbers

According to the Texas Comptroller's *Energy Report*, Comanche Peak and STP currently produce about 10 percent of the state's electricity.

Comanche Peak has two reactors with a net generating capacity of 2,300 megawatts. TXU reports that the Comanche Peak operation paid $24.4 million in property taxes and $100 million in payroll in 2006.

The South Texas Project, located 90 miles southwest of Houston, has two reactors with a net generating capacity of 2,700 megawatts. STP Units 3 and 4 will generate more than 2,600 megawatts and with the current facility, produce enough power for more than 3 million Texas homes. Construction of the two new units will cost more than $6 billion and will create more than 4,000 construction jobs during the peak period. Once operational, the facility will create 800 permanent jobs.

STP began operations in 1988 and is the largest employer in Matagorda County. According to a 2006 economic impact study prepared by the Perryman Group, the new nuclear units could create $9 billion in economic activity and more than 5,500 jobs statewide.

A Nuke Generation

Finding a younger generation to fill up to 2,000 new jobs in the next 10 years and hundreds more existing ones, as the Boomer generation retires, is a challenge. But it is one that Texas A&M University's Nuclear Power Institute hopes to meet.

A collaboration between the Dwight Look College of Engineering and the Texas Engineering Experiment Station (TEES), the institute will provide workers with sophisticated skills. Look College is one of the largest engineering colleges in the nation, with nearly 9,000 students and 12 departments. School officials believe the institute will make a significant contribution to the work force and state and national economy.

"We're really operating in a whole new way," says Lee Peddicord, director for the TEES and senior associate dean for research and professor of nuclear engineering. "The challenge is to have a partnership with partners who have never worked together before, but I believe that challenge will be a success."

Of the 800 new employees needed for the STP expansion, about 50 of those will be nuclear engineers. The rest will be technicians with two-year degrees and engineers in other specialties. And finding those workers is where the challenge lies. Peddicord and others are going to area high schools and junior highs to recruit students for a nuclear energy career path. In February, STP upped the ante by unveiling its $4 million educational incentive program, which will in the next five years pay for college classes taken by potential STP employees. In addition to all tuition and fees,

Low-Cost Energy

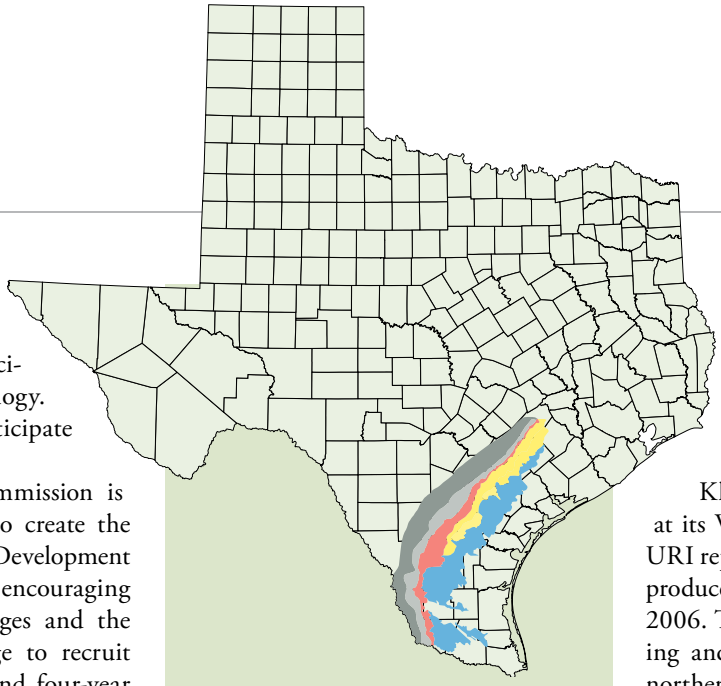
STP has the lowest production cost reported by nuclear power plants nationwide, at 1.356 cents per kilowatt-hour in 2006. STP's combined operating, maintenance and fuel expenses were the lowest among plants that report those costs to federal regulators.

the company would pay a $200 monthly stipend to up to 60 students earning an associate's degree in nuclear technology. Those students would also participate in paid summer internships.

The Texas Workforce Commission is working with these utilities to create the Texas Nuclear Workforce Development Initiative, a grant program encouraging universities, community colleges and the Texas State Technical College to recruit young people into two-year and four-year programs to prepare them for jobs in the new plants.

Where it Begins: The Mines

The Energy Report also examines the other facets of the nuclear industry including uranium mining. Mesteña Uranium, L.L.C. and Uranium Resources, Inc. (URI) are producing uranium; another company, COGEMA Mining, has a mine in reclamation; and a fourth company, South Texas Mining Venture, expects to be producing uranium by the end of this year.



Uranium Deposits in Texas

Uranium-bearing formations

- **Goliad**
- **Fleming and Oakville**
- **Catahoula**
- **Jackson Group**
- **Claiborne Group**

Source: Texas Mining and Reclamation Association and Bureau of Economic Geology

Mesteña officials reported that the Alta Mesa project produced more than 1 million pounds of yellowcake, a refined uranium ore, in 2006. URI processes uranium at Kingsville Dome in Kleberg County and mines uranium at its Vasquez property in Duval County. URI reported that the two mines combined produced 260,000 pounds of yellowcake in 2006. There are plans to recommence mining and processing at a Rosita facility in northern Duval County this year.

South Texas Mining Venture has submitted an area permit application with the Texas Commission on Environmental Quality (TCEQ) for ISL mining at its La Palangana site in Duval County. Officials there expect to have all necessary permits by the fourth quarter of 2008, with production beginning by the end of the year. **FN**

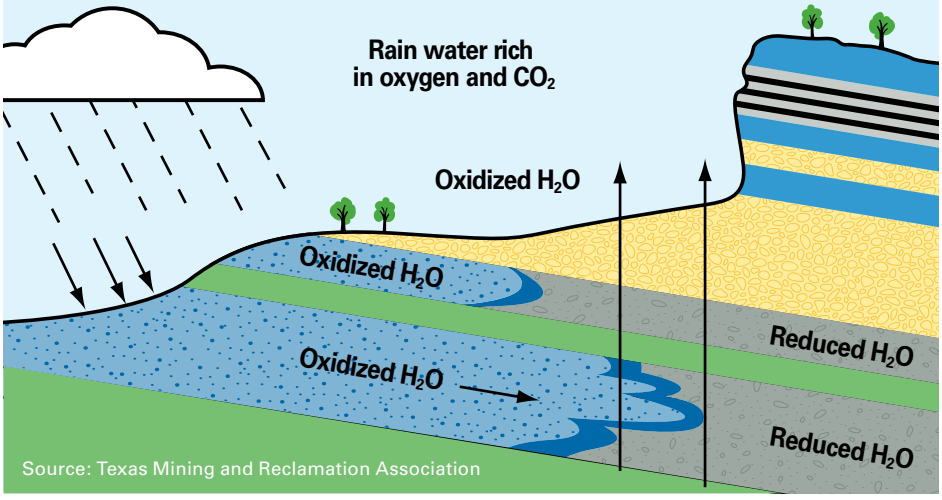
For more information on the STP expansion, visit *www.stpnoc.com*.

Fueling the Community

The South Texas Project (STP) is operated by the South Texas Project Nuclear Operating Company (STPNOC), which is owned by NRG Texas LLC (44 percent), CPS Energy (40 percent) and Austin Energy (16 percent). STPNOC has an annual payroll of $96 million for 1,150 employees. Hourly wages at South Texas average $31. Hourly employees earn an average of $64,000 annually without overtime. The average annual salary for other employees is $94,000.

Uranium Roll Front

Uranium is very soluble in water. As water percolates through a source rock or sediments, uranium is dissolved and flows downhill. When the water comes into contact with a "reducing environment" containing chemical compounds such as coal, oil and gas or sulfides, the uranium precipitates from the solution and is deposited in an ore body called a "roll front."



Source: Texas Mining and Reclamation Association

by **Clint Shields**

Powerful Alternatives

Texas' alternative energy sources gather momentum.

Oil and natural gas have dominated Texas' energy landscape for the last century. And while that's not likely to change anytime soon, Texas has some emerging energy contributors.

Wind-Driven Watts

As mentioned in this issue's cover article (p. 10), wind energy is at times controversial in the arenas of neighboring landowner rights and environmental effects on wildlife. But in the past 10 years, Texas wind energy has boomed from a curiosity into a full-blown electrical force. Texas wind projects represent about 12 percent of the total dollar investment in completed U.S. power plants in 2007.

Texas' wind-energy generation capacity jumped from 42 megawatts in 1998 to about 4,300 in 2007. A single megawatt of wind energy capacity can produce as much energy used by about 230 typical Texas homes in a year.

At 4,300 megawatts, Texas holds more than one-quarter of the total U.S. installed wind generation capacity and is the top wind-energy producing state. Additionally, more than 1,200 megawatts are under construction. Still, wind generated less than 3 percent of the state's electricity in 2007.

Most of the state's wind farms are in West Texas or the Panhandle region, which offer favorable wind speeds and open space upon which to build.

From Fields and Trash to the Tank

Ethanol and biodiesel have been produced in the U.S. for more than 100 years. But recent federal initiatives have driven up production.

This increased ethanol production does, however, present challenges. Almost one-quarter of the U.S. corn crop is now used for ethanol production, which has increased corn prices as well as food products and cattle feed. And ethanol plants need about three-and-a-half gallons of water to produce one gallon of ethanol.

More than 140 U.S. plants now produce 6.5 billion gallons of ethanol annually. Texas joined the ethanol production ranks in January 2008 with the opening of White Energy's Hereford plant, which will turn 36 million bushels of corn and milo into ethanol. The Hereford facility will produce 100 million gallons annually and bring about 40 new jobs to the area, and could create an estimated 1,600 jobs overall. A smaller plant with an annual capacity of 40 million gallons is located in Levelland. Two other Texas plants under construction in Plainview and Hereford will add another 215 million gallons of annual production capacity.

A side benefit to the Hereford plant is the production of distiller's wet grain, which will be used as a cattle feed supplement for more than 1 million cattle in the area.

Wind Energy

Leading the land

Texas leads U.S. states in wind-generated electricity by almost a two-to-one margin.

State	2007 Wind Capacity (in megawatts)
Texas	**4,296**
California	2,739
Minnesota	1,258
Washington	1,163
Iowa	1,115
Colorado	1,067
Oregon	885
Illinois	733
Oklahoma	689
New Mexico	496

Source: U.S. Department of Energy

Ethanol

E85 Fueling Stations in Texas

Source: U.S. Department of Energy

A Growing Demand

U.S. ethanol production has climbed steadily over the last few years. Ethanol's use of the U.S. corn crop, which feeds the nation's ethanol plants, has increased as well.

Year	Gallons produced
2007	6.5 billion
2006	4.9 billion
2005	3.9 billion
2004	3.4 billion

Year	U.S. corn crop used for ethanol
2007	23.7 percent
2006	20.1 percent
2005	14.4 percent
2004	11.2 percent

Sources: Renewable Fuels Association and U.S. Department of Agriculture

The facility earned the Texas Renewable Energy Industries Association's Project of the Year Award in 2007.

Today, only a handful of Texas fueling stations offer E85, a blend of 85 percent ethanol and 15 percent gasoline. Most are clustered along the I-35 corridor or in the Houston area.

Diesel engines can run on either petrodiesel or biodiesel. For now, Texas biodiesel has stronger production numbers than ethanol, with more than 20 facilities capable of pumping out more than 100 million gallons annually. Nationwide, more than 170 plants produce biodiesel, with a production capacity of more than 1 billion gallons.

Despite the increases, U.S. biodiesel production totals still only account for about 0.2 percent of U.S. diesel consumption.

Texas High Plains Manure Resources

Feedlot Biomass

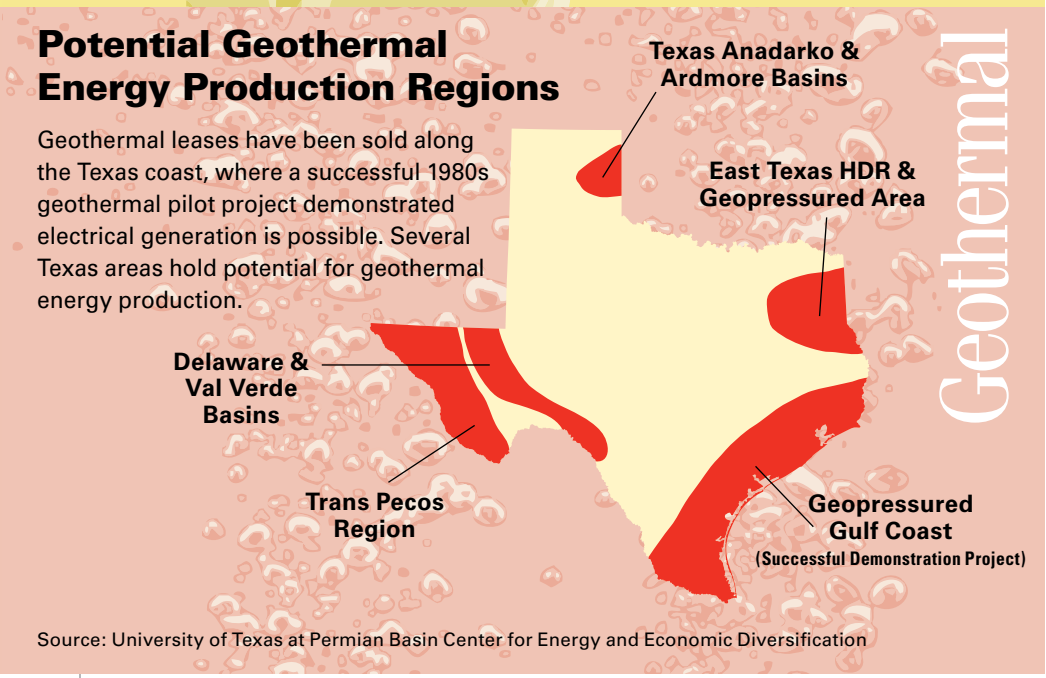
Type of Livestock	Number of Head of Livestock	Harvested Manure Millions of Dry Tons per Year	Higher Heating Value, Trillion BTU per year
Beef Cattle	2,750,000	4.7 million	30-50
Dairy	133,000	1.5 million	6-15
Swine	565,000	0.034 million	Not included in estimate

Source: Texas Agricultural Experiment Station

Potential Geothermal Energy Production Regions

Geothermal

Geothermal leases have been sold along the Texas coast, where a successful 1980s geothermal pilot project demonstrated electrical generation is possible. Several Texas areas hold potential for geothermal energy production.



Source: University of Texas at Permian Basin Center for Energy and Economic Diversification

Powerful Leftovers

As long as there have been concentrated animal-feeding operations (CAFOs), commonly called feedlots, there has been the question of how to dispose of cattle waste. Generating electricity from it is one of the latest answers.

Aside from a planned ethanol plant powered by cattle manure, Microgy Inc.'s Huckabay Ridge plant near Stephenville is the other commercial power plant converting manure to fuel.

In 916,000-gallon anaerobic digesters, manure is mixed with other fats, greases and oils. Bacterial reactions break down the manure into methane that is then treated on site and delivered to the Lower Colorado River Authority, which uses it to generate electricity.

At full operation, the facility will use eight digesters and manure from 10,000 cows to produce more than 1 billion cubic feet of biogas annually.

A study by the Houston Advanced Research Center estimates that Texas beef and dairy cattle manure could produce 107 megawatts of electricity, enough to power about 67,000 homes.

Geothermal Interest Heating Up

There are two main uses for geothermal energy: electricity generation and direct applications such as spa heating and crop drying.

Texas holds the potential to generate 2,000 to 10,000 megawatts of geothermal electricity within the next decade. Holes drilled for oil and gas fields could also be configured to harness the power of the earth.

"Most of the expense is up-front cost with a large portion of that from drilling and exploration," says Maria Richards of SMU's Geothermal Lab. "But the fact that we have a lot of holes in the ground already, showing us what's down there, gives Texas an advantage."

Geothermal heat pumps, however, are in use for heating and cooling buildings, schools and homes across Texas. These highly efficient systems, also called ground-source heat pumps, can reduce electricity consumption for climate control by as much as 50 percent. FN

by **Michael Castellon**

Between Ecology and Economy

Profitable results as builders and employers go green

For years, the conversation about eco-friendly practices was limited to earthy coffee houses and college campuses. But now it has expanded to corporate boardrooms and office break rooms. When ecology and economy collide, the result is not only a healthy planet but also a surprising cycle of revenue and growth.

In Texas, sustainability has met profitability. An epic gap has historically existed between businesses and environmentalists who together walk the line between maximizing revenue while doing what's best to preserve the earth's natural resources. Many Texas businesses and corporations have discovered that "greenability" provides big gains to the bottom line while contributing to healthier workers.

Background

Just a few years ago, designing and building an eco-friendly residential or commercial building was wildly expensive. Further complicating matters, many industry and environmental officials couldn't define what it meant to be green.

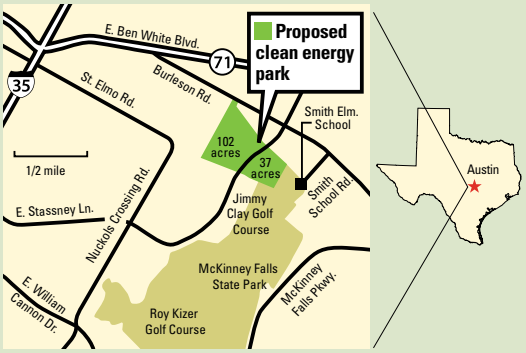
But now, thanks largely to the exponential growth of a population of Texans who seek to live and work in eco-friendly homes and offices, going green is easier, cheaper and more profitable than ever. More earth-friendly paint and lumber products are available, as are construction waste recycling services.

"Years ago, there weren't many suppliers of eco-friendly products, which kept prices high," says Lance Sallis, managing partner in Trammell Crow Co.'s Austin office. "Thanks to growing awareness across the state, we now have more suppliers of these products. Going green now costs only about 5 to 10 percent more than traditional building projects."

And that slight cost increase pays off for tenants in various ways, usually on energy cost savings. Green-engineered buildings are designed and tested to efficiently heat and cool throughout the year.

Sallis says demand for green homes and office buildings has risen dramatically across Texas.

"Our goal is to create an environment where the non-profit world and the for-profit world can come together to facilitate this cycle."
– Lance Sallis, Trammell Crow Co.



Austin Resource Center for the Homeless, City of Austin

The Austin Resource Center for the Homeless has a 13,000-gallon rainwater collection system and a passive solar hot water system.

Photo courtesy of Austin Resource Center for the Homeless

Spring Terrace, Foundation Communities

Austin's Spring Terrace, a multi-unit residential building, uses solar power and rainwater harvesting to supplement utility use.

Photo courtesy of Foundation Communities

"Corporations and other businesses have discovered that employees not only expect to work in clean environments, but they thrive in them," he says.

Sallis should know. Trammell Crow Co. is overseeing the development of the Texas Clean Energy Park, a 140-acre, 12-building, $100 million facility that will serve as a green research, training, and business center in Austin.

The million-square-foot space will be a major component to Texas' renewable energy industries.

The facility is expected to have a tremendous economic impact, signaling that Texas is onboard with renewable energies, which will attract a number of jobs in research and innovation related to renewable energy.

"Organizations and government agencies throughout the state realize that this market segment is here to stay," Sallis says. "Not only is this good for the earth, but it's good for economic development. Green energy pays good wages, and a commitment to green energy attracts and provides jobs."

What Makes a Building Green?

This question has become easier to answer thanks largely to the U.S. Green Building Association (USGBA), which has developed extensive guidelines to abide while building green.

Reflective Roofs: Reduce the amount of heat buildings absorb from the sun, contributing to greater energy efficiency.

Construction Pollution Reduction: Builders must create an erosion and sedimentation control plan for all construction activities to protect soil, area streams, and prevent dust pollution.

Heating and Cooling Specs: Heating and cooling systems are tested rigorously for energy efficiency during and after construction.

Size and Placement of Windows: Natural sunlight goes a long way to lift employee mood and morale.

Source: U.S. Green Building Council

The Texas Workforce Commission agreed, and provided a $600,000 grant to help launch the first phase of the Texas Clean Energy Park.

But there's a bigger need to build green. As more developers move to eco-conscious practices, greater demand for materials is achieved, and as a result, so increases the demand for research and innovation in these areas.

"Our goal is to create an environment where the nonprofit world and the for-profit world can come together to facilitate this cycle," Sallis says.

In that regard, the Clean Energy Park provides a one-two punch in support of natural and human resources: the facilities will be constructed using eco-friendly methods conducive to the health of the surrounding environment as well as the building's tenants, and will also be a major hub for renewable energy research and business for the long-term. FN

For more information on green building practices and guidelines, visit the U.S. Green Building Council at *www.usgbc.org.*

Government Canyon Visitor Center, Texas Parks and Wildlife

The Government Canyon Visitor Center in Helotes uses sheltered outdoor spaces that catch the breezes. This cuts air conditioning needs by 35 percent.

Photo courtesy of Texas Parks and Wildlife Department

by **David A. Rivers**

Oil and Gas Drilling Projects Increasing in the Gulf of Mexico

Riding the swells of deepwater drilling

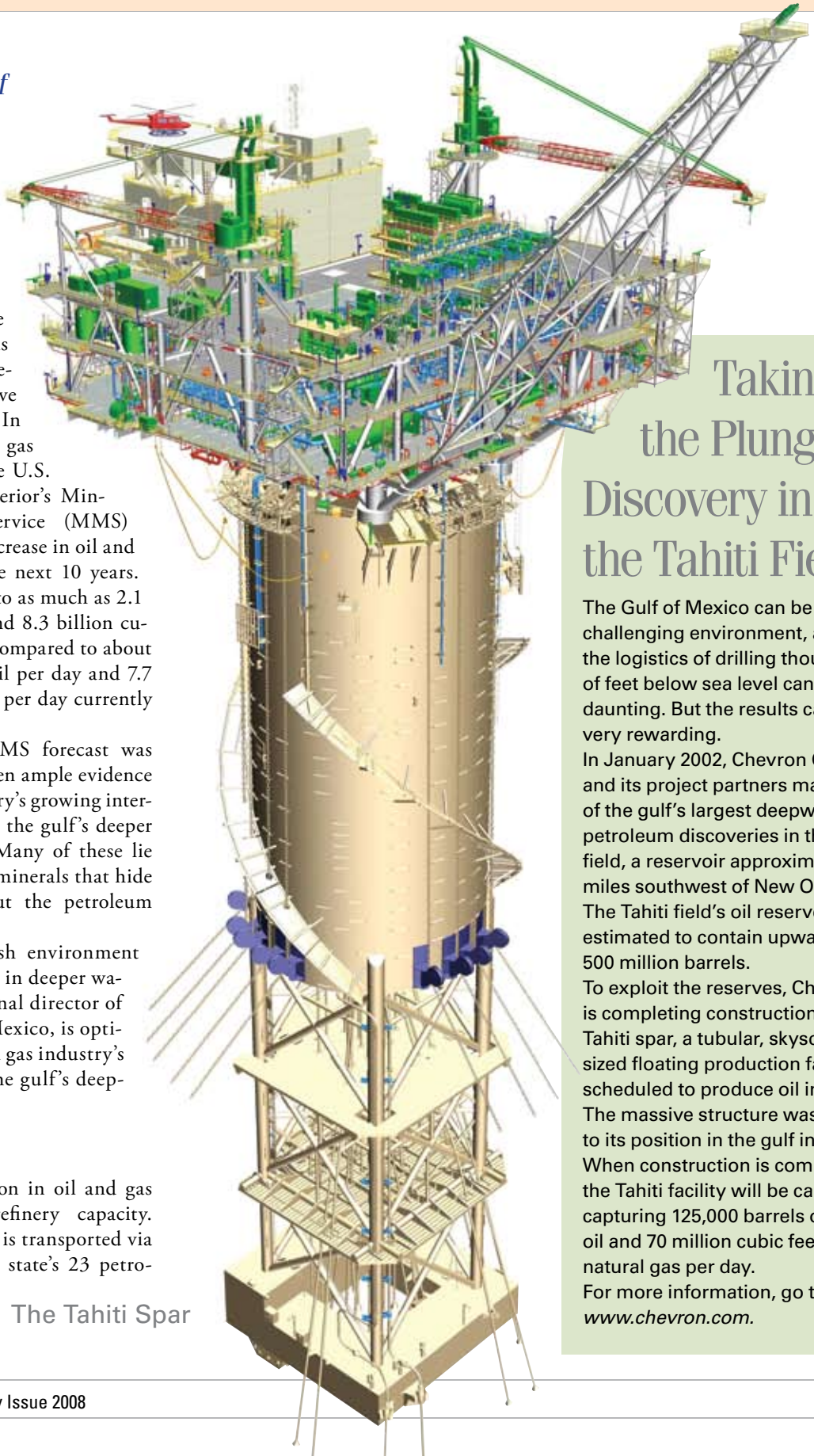
After years of slumping oil and gas production in the Gulf of Mexico, industry operators are riding a wave of energy prosperity in the gulf's deep-water areas where several large petroleum reserves have recently been found. In its 2007 - 2016 oil and gas production forecast, the U.S. Department of the Interior's Minerals Management Service (MMS) projected a moderate increase in oil and gas production over the next 10 years. The increase could rise to as much as 2.1 million barrels of oil and 8.3 billion cubic feet of gas per day, compared to about 1.3 million barrels of oil per day and 7.7 billion cubic feet of gas per day currently produced.

Even before the MMS forecast was published, there had been ample evidence of the oil and gas industry's growing interest in further exploring the gulf's deeper water reservoir fields. Many of these lie beneath thick layers of minerals that hide important details about the petroleum beds below.

In spite of the harsh environment associated with drilling in deeper waters, Lars Herbst, regional director of MMS for the Gulf of Mexico, is optimistic about the oil and gas industry's continued interest in the gulf's deepwater frontier.

Deep Rewards

Texas leads the nation in oil and gas production and in refinery capacity. Crude oil from the gulf is transported via pipelines to any of the state's 23 petroleum refineries.



The Tahiti Spar

Taking the Plunge—Discovery in the Tahiti Field

The Gulf of Mexico can be a challenging environment, and the logistics of drilling thousands of feet below sea level can be daunting. But the results can be very rewarding.

In January 2002, Chevron Corp. and its project partners made one of the gulf's largest deepwater petroleum discoveries in the Tahiti field, a reservoir approximately 190 miles southwest of New Orleans. The Tahiti field's oil reserves are estimated to contain upwards of 500 million barrels.

To exploit the reserves, Chevron is completing construction of the Tahiti spar, a tubular, skyscraper-sized floating production facility scheduled to produce oil in 2009. The massive structure was towed to its position in the gulf in March. When construction is complete, the Tahiti facility will be capable of capturing 125,000 barrels of crude oil and 70 million cubic feet of natural gas per day.

For more information, go to *www.chevron.com*.

Texas also benefits financially from gulf oil and gas lease payments on both federal and state mineral leases. Last December, the MMS released the results of a Western Gulf of Mexico lease sale. The sale netted $287 million and awarded 274 leases on federally owned property. Texas' fiscal 2006 receipts from mineral leases in the Gulf of Mexico totaled more than $60 million.

Oil rig workers' wages also contribute considerably to the Texas economy. Rig workers are well-trained and well-compensated. They include electrical and electronic engineers, instrument and systems specialists and others. The average starting annual salary for a worker on an offshore platform is about $50,000.

Deepwater Drilling Reaches Record High in Gulf

Last year, a record 15 rigs were drilling in 5,000 to 9,000 feet of water in the gulf, a trend that will continue, says MMS director Randall Luthi, who views the continued increase in drilling activity as a show of confidence in the resource potential of the gulf's deepwater frontier.

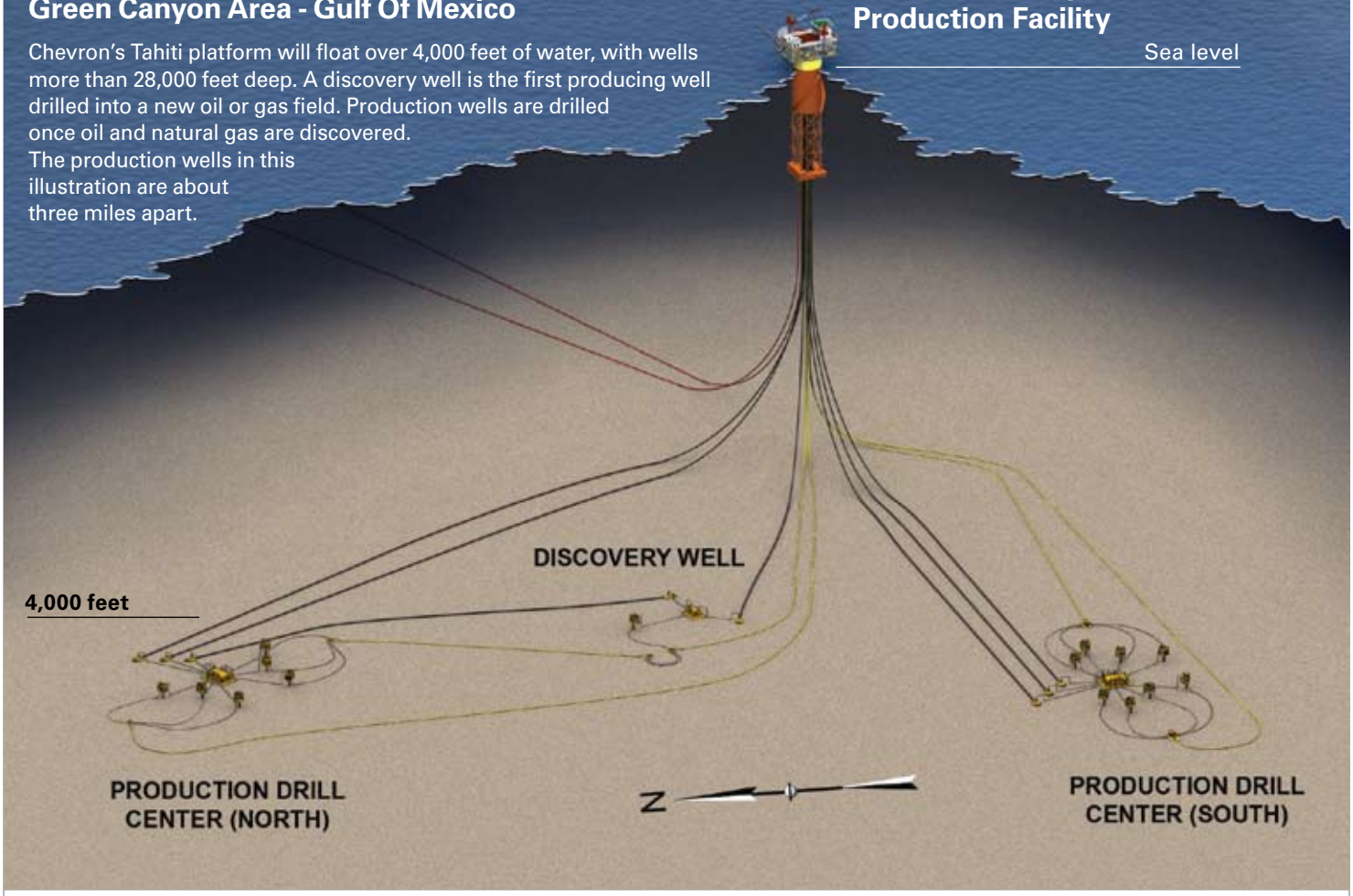
New rigs are under construction that promise to drill to even deeper depths. They include newer, more sophisticated drill ships and stationary semi-submersibles that will be able to operate at water depths of as much as 12,000 feet.

To successfully exploit deepwater reserves, major oil operators such as Exxon, Shell, Chevron and others must stay on the leading edge of platform and drilling technology. Modern oil rigs use sophisticated computers and software for automated systems control, global positioning, satellite communications, and a host of advanced techniques. **FN**

Tahiti Field Development

Green Canyon Area - Gulf Of Mexico

Chevron's Tahiti platform will float over 4,000 feet of water, with wells more than 28,000 feet deep. A discovery well is the first producing well drilled into a new oil or gas field. Production wells are drilled once oil and natural gas are discovered. The production wells in this illustration are about three miles apart.



by **Bruce Wright**

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The Texas Energy Portfolio

Key elements of Texas' energy portfolio are likely to include:

Solar Energy

The sun is an inexhaustible energy source. For millennia, humans have harnessed its power with methods as simple as south-facing windows. Today, a constantly improving array of technologies is making the sun a promising source for commercial quantities of electrical power.

Photovoltaic cells have become common in "off-grid" uses such as railroad warning signs and area lighting. Increasing numbers of homeowners are using them as well to supplement or even replace power from the utility company.

For large-scale power production, however, concentrating solar power (CSP) systems are more appropriate. CSP systems use fields of reflectors to focus sunlight that then heats a fluid to make steam, which in turn is used to drive turbines and generate electricity. Texas has joined with six other Southwestern states and the U.S. Department of Energy (DOE) in a project aimed at installing CSP systems capable of generating 1,000 megawatts (MW) of power in the southwestern states by 2010.

But solar power is not without its drawbacks. At present, electricity generated by solar technology is relatively expensive. And solar energy is an intermittent energy source, producing power only when the sun is shining.

Wind

Power generated by the wind is among the world's fastest-growing energy sources, increasing by 30 percent annually worldwide over the last decade. Texas had a quarter of the nation's installed wind energy capacity at the end of 2007, by far the most of any state.

Texas wind production is mostly centered in the gusty regions of West Texas. Transmitting its energy has been a significant hurdle for the wind industry, since the best sites for wind energy development often are far away from urban centers and the wire networks that provide them with power.

Wind energy can be more expensive than that produced with fossil fuels, but its cost per kilowatt-hour has declined by about 80 percent over the last two decades due in large part to improved technologies.

Wind energy is intermittent due to its variable nature — wind speed and direction change more or less continuously. Texans were pointedly reminded of this in February 2008, when a sudden drop in wind energy production helped trigger service cuts to some large customers of the state's largest power grid. In addition, the siting of wind turbines can be problematic, due to public opposition to their appearance, noise and potential hazard to wildlife.

Nuclear Energy

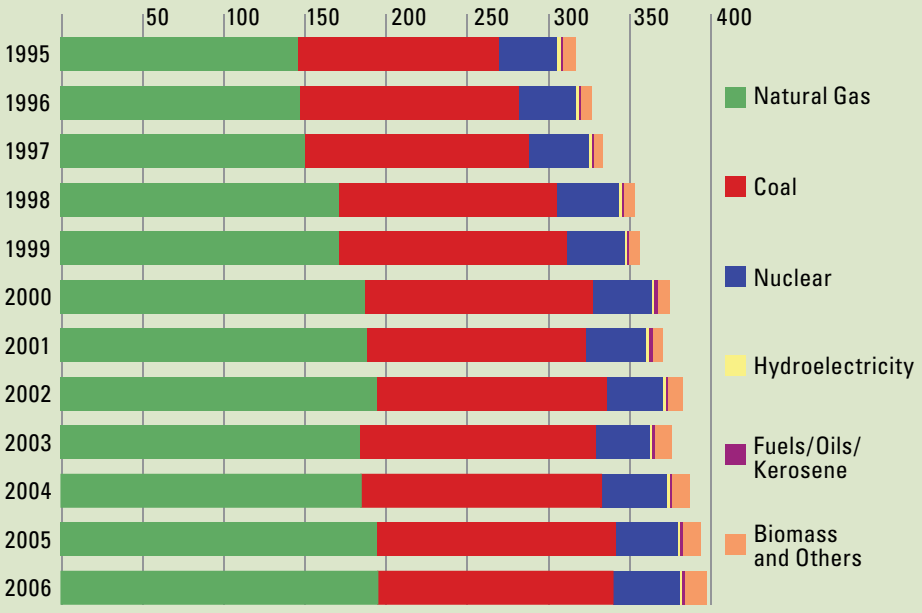
Excluding capital costs, nuclear energy is among the cheapest ways to generate electricity, and produces no emissions of greenhouse gases. Today, a new generation of advanced reactors, rising global energy demands and the need to reduce emissions all point to a renaissance for nuclear energy.

Texas has two operating nuclear power facilities, Comanche Peak near Glen Rose and the South Texas Project (STP) in Matagorda County. But more facilities are on the horizon. Owners of the South Texas Project have submitted an application to expand their facility. And over the next two years, the U.S. Nuclear Regulatory Commission expects to receive applications for six more new nuclear reactors in Texas, two more at Comanche

What Keeps the Light On?

Coal and natural gas produce most of Texas' electricity.

Numbers in millions of megawatt-hours



Source: U.S. Energy Information Administration and Texas Comptroller of Public Accounts

Peak and four at two new sites. Together, Comanche Peak and STP produce about 10 percent of the state's electricity.

Perhaps the most hotly debated issue concerning nuclear power is the disposal of radioactive waste. This concern may be lessened with the eventual opening of the nation's first permanent repository for high-level radioactive waste at Yucca Mountain, Nevada. DOE estimates that Yucca Mountain may begin accepting spent nuclear fuel in 2017 at the earliest.

Biomass

Biomass is simply any plant or animal matter used to produce electricity, heat or transportation fuels, such as wood products, crops, grasses and municipal solid waste.

Texas' cattle industry, for instance, yields an inevitable byproduct in the form of manure. This waste is increasingly being viewed as an energy source rather than a nuisance. An operational plant in Stephenville that turns dairy waste and restaurant grease into natural gas supports seven full-time jobs; a manure gas-fired ethanol plant near Hereford in the Panhandle will create 61 jobs in 2008.

Landfills are still another useful source of energy. About half of the decomposition gases they emit consist of methane that can be used to generate electricity and fire boilers. Texas has at least 24 landfill gas energy projects and at least 57 more sites that could produce landfill gas in useful quantities.

Such sources can provide useful amounts of supplemental energy, but they have their drawbacks as well, largely in the form of higher costs, limited supplies and transportation difficulties. The forms of biomass energy attracting the most attention, however, are ethanol and biodiesel, liquid fuels produced from crops and other organic matter.

Ethanol and Biodiesel

Ethanol can be blended with gasoline to fuel vehicles, generally as E10—a 10-percent ethanol, 90-percent gasoline mixture than can be used in conventional autos, or E85, which is 85 percent ethanol and 15 percent gasoline, usable only by special "flex-fuel" vehicles. In the U.S., most ethanol is made from corn, although research continues into the use of other crops for this purpose. Two Texas ethanol plants are operating and two more are under construction.

Ethanol is not without problems, however. A boom in production has driven up the price of corn, which in turn has contributed to increases in the price of cattle feed and various food products. In addition, production of biofuels from feedstocks such as corn and soy is extremely water-intensive.

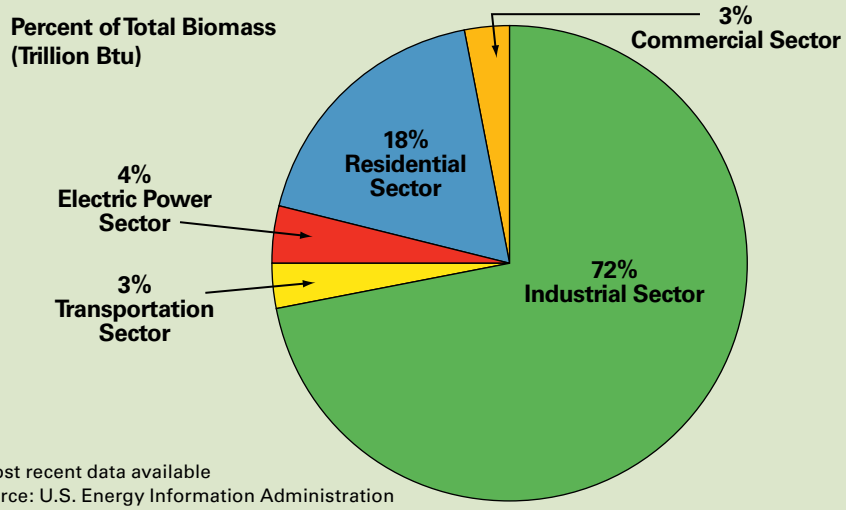
Biodiesel is simply diesel fuel made from animal or vegetable materials, such as soybeans and peanuts, animal fats and used cooking oils. It can be substituted for or supplemented with conventional, petroleum-based diesel fuel ("petrodiesel"). The most common blend used today is a mix of 20 percent biodiesel with 80 percent petrodiesel, or "B20." More than 200 major vehicle fleets in the U.S. run on biodiesel, including those of the U.S. Postal Service and the military.

Texas is the nation's largest producer of biodiesel, with a current production capacity of more than 100 million gallons annually and another 87 million gallons in annual capacity under construction. Biodiesel is nontoxic, and vehicles using it emit fewer pollutants than those fueled by petrodiesel, although they also generally get fewer miles per gallon. FN

See the Report

The Energy Report contains in-depth information and analysis on these and other energy sources expected to play an increasing role in the Texas economy. The report is available on the Web at *www.window.state.tx.us/specialrpt/energy*.

Texas Biomass Energy Consumption by Sector, 2005*



*Most recent data available
Source: U.S. Energy Information Administration

by **Editorial Team**

Brief Bytes

New Digs for Texas Game Wardens

The Texas Parks and Wildlife Department (TPWD) is developing a $15 million training center for its game wardens and staff. TPWD plans to move its existing Texas Game Warden Training Center to a larger site in Hamilton County by July 2008.

The move will enable prospective game wardens to train in a central area, says Major Randy Odom, the chief of training. The new facility will allow most cadet training to be conducted on site, with the exception of boat operations. Currently cadet training, in areas such as firearms, emergency vehicle operations and boat operations, are conducted off site at facilities operated by other agencies.

In 2005, the Police Activities League donated 220 acres of its 244-acre ranch in Hamilton to TPWD, which aims to sell its existing training property in Austin to help fund development of the new facility. TPWD is also seeking private donations and corporate sponsorships to develop the project.

The planned training center will include an upgrade of kitchen facilities and student dormitories and construction of an administration building, classroom, gym, indoor pool, firing range, driving track and obstacle course for physical training, says Odom.

"Our move to Hamilton County will make our training more efficient as the training infrastructure will be self-contained in the facility," Odom says.

For more information on the planned Texas Game Warden Training Center, please visit *www.texasgamewarden.com* or call (800) 322-8492.

(Karen Hudgins)

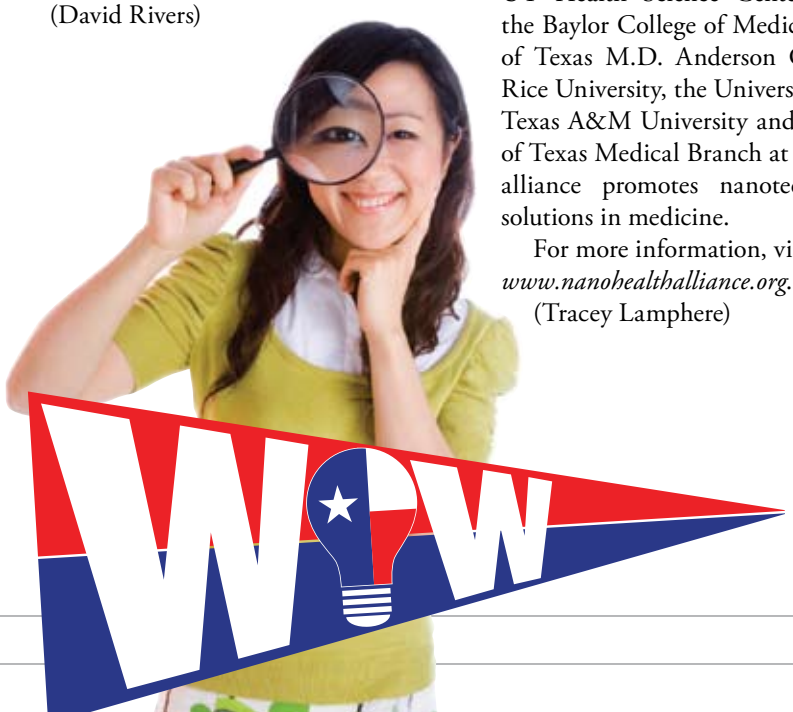
What Do Watt Watchers Watch?

Watt Watchers of Texas is a State Energy Conservation Office (SECO) program for elementary, middle and high schools that promotes energy conservation. Student monitors patrol the halls of schools and reduce wattage waste by turning off lights and leaving tickets for watt wasters.

More than 4,500 Texas classrooms have a Watt program. Texas schools could save more than $12 million in wasted energy if every teacher would turn off the lights in the classroom for just two unoccupied hours per day.

SECO is a division of the Texas Comptroller of Public Accounts, and the U.S. Department of Energy sponsors Watt Watchers of Texas. For more information, visit *www.wattwatchers.org*.

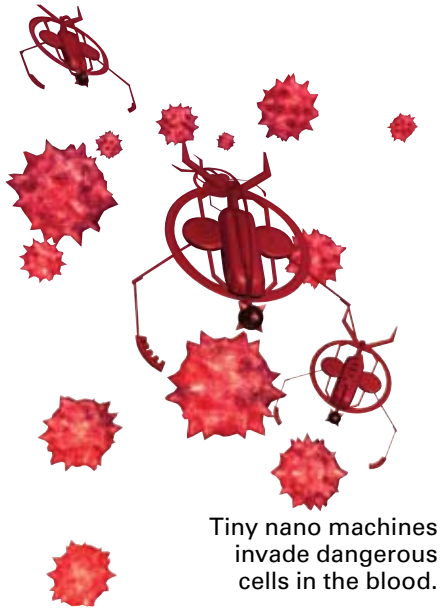
(David Rivers)



NanoHealth Gets Big Bucks

The Alliance for NanoHealth, a consortium made up of seven Houston-area universities, is slated to receive $2.2 million in new federal funding over the next year.

The funding was included in the fiscal 2008 Consolidated Appropriations Bill as announced by U.S. Sen. Kay Bailey Hutchison (R-Texas) and U.S. Rep. John Culberson (R-Houston).



Tiny nano machines invade dangerous cells in the blood.

Alliance for NanoHealth members are UT Health Science Center at Houston, the Baylor College of Medicine, University of Texas M.D. Anderson Cancer Center, Rice University, the University of Houston, Texas A&M University and the University of Texas Medical Branch at Galveston. The alliance promotes nanotechnology-based solutions in medicine.

For more information, visit *www.nanohealthalliance.org*.

(Tracey Lamphere)

Community Colleges Booming in Texas

Community colleges in Texas are experiencing growth statewide that is expected to continue at about 3 to 5 percent over the next several years, primarily because of more affordable tuition, fees, commute costs, and room and board expenses.

"People come to community colleges because that's where they live, the colleges are serving a population base," says Reynaldo Garcia, president of the Texas Association of Community Colleges.

The fastest-growing community college districts in Texas include Collin County Community College District in Plano and South Texas College District in McAllen.

For more information, visit *www.tacc.org*.

(David Rivers)

Fuel Cell Technology Goes to College

Texas State Technical College in Waco is one of the first community colleges in the state to offer a two-year degree program to train students for entry-level positions as fuel cell technicians. Starting salary for qualified graduates is about $32,000. Specialists in the field typically perform fuel cell installations, operations, maintenance, troubleshooting and repair.

The project is the brainchild of Sidney Bolfing, a senior instructor at TSTC Waco and the co-founder of The Renewable Energy for Education Consortium (TREEC). In addition to TSTC's Waco campus, TREEC has renewable technology programs at five other community colleges in Texas.

For more information, visit *www.treec.org*.

(David Rivers)

Get Out of Your Cubicle

Good health and productivity in the workplace have an undeniable link. Fitness is no longer a craze, but crucial to the quality of life. Organizations including the Comptroller's office support healthy habits through employee wellness programs. The Comptroller's Wellness Program includes activities for weight loss and increased physical activity with a little fun thrown in.

The "Making Strides@CPA" challenge, just one facet of the overall program, is a hit among Comptroller employees, says Audrey Thompson, Wellness Program coordinator. It challenges workers to walk 30 minutes a day, four times a week.

The first installment of Making Strides, which ended in November 2007, had 435 participants who walked an astounding 443,116 minutes.

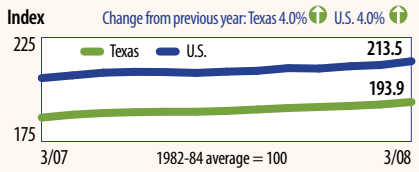
USAA, a San Antonio-based financial services company, provides for its employees on-site fitness centers, smoking cessation and weight management classes, and healthy food choices in cafeterias and vending machines. Participation in the program rose to 68.5 percent in 2005. Participants reported significant decreases in weight, smoking rates and other health risk factors. The decline in absenteeism alone is expected to save USAA more than $105 million in three years.

(Tracey Lamphere)

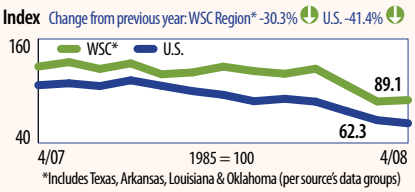
Key Texas Economic Indicators

Texas ranked first in job growth over the past year, adding nearly three jobs for every additional job in the state ranking second. Still, the rate of Texas job growth is slowing. Consumer confidence is at its lowest level in five years in both the nation and in the region including Texas. Texas is weathering the national slowdown better than most states because of solid growth in oil and gas, an industry where Texas' concentration of business activity is five times the national average.

Consumer Price Index

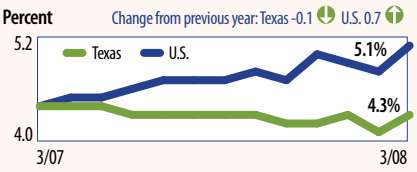


Consumer Confidence Index

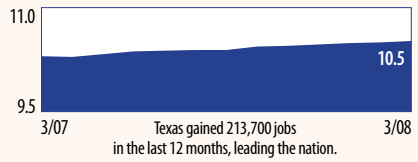


*Includes Texas, Arkansas, Louisiana & Oklahoma (per source's data groups)

Unemployment Rate

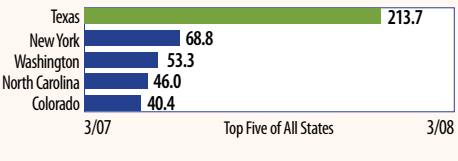


Nonfarm Employment

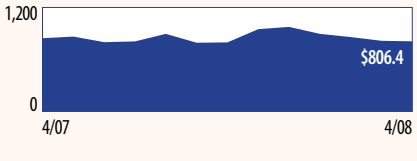


Texas gained 213,700 jobs in the last 12 months, leading the nation.

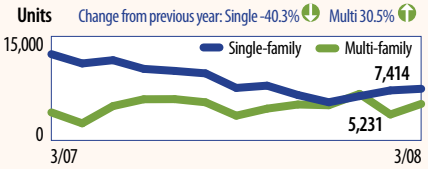
Change in Nonfarm Employment



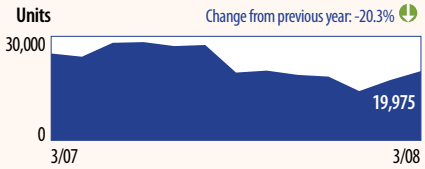
State Sales Tax Collections, Retail Establishments



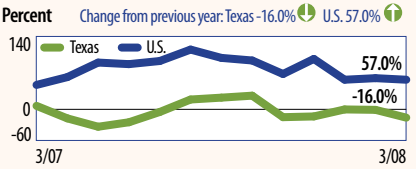
Housing Permits



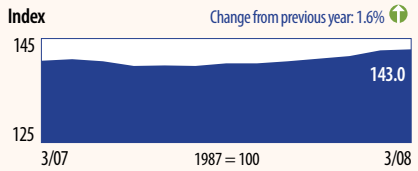
Existing Single-family Home Sales



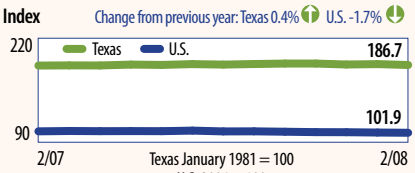
Mortgage Foreclosures, Annual Change



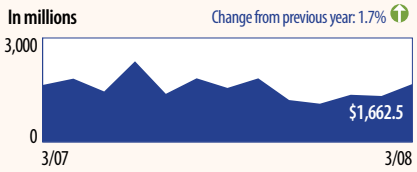
Industrial Production Index



Leading Economic Indicators Index



Contract Value, Non-Residential Building Construction



Texas Production and Consumption Indicators

	Crude Oil Production	Natural Gas Production	Active Oil & Gas Drilling Rigs	Motor Fuels Taxed		Median Sale Price, Existing Single-family Home	Auto Sales	Cigarettes Taxed
	Value	Value	Units	Gasoline	Diesel	Dollars	Net Value	Packages of 20
Date	(Millions)	(Millions)		(Millions of Gallons)			(Millions)	(Millions)
2006	$19,657.5	$19,852.1	746	11,372.8	3,731.6	$143,100	$45,756.2	1,280.2
2007	21,412.7	25,662.4	834	11,624.8	3,886.9	147,500	48,500.6	1,085.8
Feb-07	$1,350.6	$1,809.0	813	923.2	299.5	$140,600	$3,669.5	68.5
Mar-07	1,542.7	2,119.0	818	880.2	304.8	144,700	3,717.8	96.9
Apr-07	1,558.2	2,087.2	824	968.2	369.2	146,400	4,128.7	109.7
May-07	1,557.8	2,395.4	829	983.1	248.5	149,200	4,233.3	92.3
Jun-07	1,556.1	2,418.2	834	1,002.3	326.8	155,000	4,227.3	89.5
Jul-07	1,769.9	2,286.8	831	978.2	326.3	152,200	4,159.0	96.2
Aug-07	1,790.1	2,132.8	844	974.3	320.5	152,700	4,368.3	151.3
Sep-07	1,982.5	1,984.9	837	1,021.1	360.6	146,900	4,383.8	29.3
Oct-07	2,260.8	2,244.2	842	939.6	315.9	143,400	4,294.2	96.1
Nov-07	2,411.3	2,163.6	860	1,025.7	371.5	144,900	4,303.5	92.8
Dec-07	2,309.7	2,416.0	884	965.8	342.4	147,500	3,678.9	88.2
Jan-08	2,422.1	2,431.5	858	985.8	313.7	138,600	3,828.5	76.7
Feb-08	2,284.4		866	954.2	343.2	142,500	4,034.0	80.2
Mar-08			881	950.6	324.1	147,100	3,840.8	79.1
Apr-08			887	1,010.4	281.1		3,940.0	90.5

March Cash Condition[1]

(Amounts in millions)	General Revenue	Other Funds	Total Cash
Beginning Balance March 1, 2008	$9,780.4	$17,186.5	$26,966.9
Revenue/Expenditures			
Revenue	5,543.5	1,533.4	7,076.9
Expenditures	4,945.7	1,901.0	6,846.7
Net Income (outgo)	$597.8	$-367.6	$230.2
Net Interfund Transfers and Investment Transactions	$-629.4	$411.2	$-218.2
Total Transactions	-31.6	43.6	12.0
End Cash Balance March 31, 2008[2]	**$9,748.8**	**$17,230.1**	**$26,978.9**

[1] Cash stated is from the Comptroller's Uniform Statewide Accounting System (USAS) and will vary from the amounts reflected in the cash accounts of the Treasury Operations Division of the Comptroller's office due to timing differences. Net amounts shown (less refunds) exclude funds that are authorized to be held outside the State Treasury and are not processed through USAS. Suspense and Trust Funds are included, as are unemployment compensation trust funds collected by the state but held in the Federal Treasury. Totals may not add due to rounding.

[2] The ending General Revenue Fund Balance includes $4.6 billion derived from the sale of cash management notes.

State Revenue/All Funds[1]

(Amounts in millions)	Monthly Revenue Mar. 2008	Fiscal Year-to-Date Sept. 2007-Mar. 2008 Revenue	% Change YTD/YTD
Tax Collections by Major Tax			
Sales Tax	$1,652.8	$12,351.3	7.2%
Oil Production Tax	106.6	709.8	51.5
Natural Gas Production Tax	190.8	1,327.3	23.9
Motor Fuel Taxes	248.0	1,815.3	3.5
Motor Vehicle Sales Tax	271.1	1,945.5	6.2
Franchise Tax	65.0	77.0	-80.2
Cigarette & Tobacco Taxes	113.7	787.5	42.0
Alcoholic Beverages Tax	63.6	443.8	8.1
Insurance Companies Tax	317.0	872.3	5.2
Utility Taxes[2]	0.4	230.0	-3.4
Inheritance Tax	0.1	4.3	16.3
Hotel/Motel Tax	29.8	199.7	10.1
Other Taxes[3]	8.7	370.0	-17.6
Total Tax Collections	**$3,067.7**	**$21,133.9**	**7.2%**
Revenue by Receipt Type			
Tax Collections	$3,067.7	$21,133.9	7.2%
Federal Income	1,974.0	14,539.1	8.1
Interest and Investment Income	281.8	1,780.8	18.1
Licenses, fees, permits, fines,	480.0	7,332.2	110.2
Contributions to Employee Benefits	420.7	2,675.2	7.4
Sales of Goods and Services	32.1	273.0	14.5
Land Income	84.2	538.3	10.7
Net Lottery Proceeds[4]	119.7	941.1	2.6
Other Revenue Sources	616.8	4,061.1	6.4
Total Net Revenue	**$7,076.9**	**$53,274.7**	**15.6%**

[1] Excludes revenues for funds that are authorized to be held outside the State Treasury and are not processed through USAS. Totals may not add due to rounding.

[2] Includes the utility, gas utility administration and public utility gross receipts taxes.

[3] Includes the cement and sulphur taxes and other occupation and gross receipt taxes not separately identified.

[4] Gross sales less retailer commissions and the smaller prizes paid by retailers.

State Expenditures/All Funds[1]

(Amounts in millions)	Monthly Expenditures Mar. 2008	Fiscal Year-to-Date Sept. 2007-Mar. 2008 Expenditures	% Change YTD/YTD
By Object			
Salaries and Wages	$831.4	$5,802.3	4.0%
Employee Benefits/ Teacher Retirement Contribution	705.3	4,870.1	6.9
Supplies and Materials	74.8	541.0	21.7
Other Expenditures	227.8	1,581.1	9.2
Public Assistance Payments	2,847.5	18,696.0	13.5
Intergovernmental Payments:			
Foundation School Program Grants	598.3	13,204.7	31.9
Other Public Education Grants	948.0	2,669.8	3.6
Grants to Higher Education	104.2	592.3	7.1
Other Grants	164.4	1,215.8	8.6
Travel	11.8	82.4	9.8
Professional Services and Fees	103.7	1,206.0	6.5
Payment of Interest/Debt Service	210.7	570.9	13.3
Highway Construction and Maintenance	393.7	3,068.4	-9.2
Capital Outlay	36.1	265.0	34.6
Repairs and Maintenance	49.2	375.3	15.7
Communications and Utilities	49.6	285.5	-20.8
Rentals and Leases	18.6	153.2	4.9
Claims and Judgments	5.3	69.1	47.2
Cost of Goods Sold	60.7	481.8	13.1
Printing and Reproduction	3.8	26.6	3.7
Total Net Expenditures	**$6,846.7**	**$55,757.2**	**13.0%**
By Function			
General Government			
Executive	$470.6	$3,143.7	7.2%
Legislative	9.2	73.5	-0.4
Judicial	15.6	139.8	3.6
Subtotal	495.3	3,357.0	6.8
Health and Human Services	2,713.4	17,861.5	12.1
Public Safety and Corrections	327.1	2,470.4	8.0
Transportation	586.2	4,524.5	-3.4
Natural Resources/Recreational Services	148.8	1,149.3	9.8
Education	1,659.4	20,916.1	21.2
Regulatory Agencies	21.0	174.0	22.8
Employee Benefits	614.4	4,229.1	8.1
Debt Service—Interest	210.7	570.9	13.3
Capital Outlay	36.1	265.0	34.6
Lottery Winnings Paid[2]	34.5	239.4	-3.2
Total Net Expenditures	**$6,846.7**	**$55,757.2**	**13.0%**

[1] Excludes expenditures for funds that are authorized to be held outside the State Treasury and are not processed through USAS. Totals may not add due to rounding.

[2] Does not include payments made by retailers. Previously shown as "Other expenditures."

Some revenue and expenditure items have been reclassified, changing year-to-date totals. The ending cash balance is not affected because changes reflected in "total net revenues" and "total net expenditures" offset changes in "net interfund transfers and investments transactions" in the cash condition table.

Revenues and expenditures are reported for the most recent month available and as a running total for the current fiscal year-to-date. In addition, year-to-date figures are compared with the same period in the last fiscal year. These comparisons are reported as percentage changes, which may be positive or negative (shown by a minus sign).

Trust fund transactions are included within revenues and expenditures in the "all funds" presentations. Trust funds are not available to the state for general spending.

Notes:

Crude oil and natural gas figures are net taxable values. Gasoline gallons include gasohol. Auto sale values are calculated from motor vehicle taxes collected on new and used vehicle sales. All figures are seasonally adjusted, except for sales tax collections; rigs; consumer price; housing permits/sales/prices; and consumer confidence. Figures are based on most recent available data. Annual figures are for calendar years.

Sources:

Key Texas Economic Indicators:
Consumer Price Index: U.S. Bureau of Labor Statistics
Consumer Confidence Index, Leading Indicators Index (U.S.): The Conference Board
Unemployment Rate: Texas Workforce Commission, U.S. Bureau of Labor Statistics
Nonfarm Employment, Change in Nonfarm Employment: Texas Workforce Commission
Leading Indicators Index, State Sales Tax Collections, Retail Establishments: Texas Comptroller of Public Accounts
Texas Housing Permits (Single- Multi-family), Existing Single-family Home Sales: The Real Estate Center at Texas A&M University
Industrial Production Index: Federal Reserve Bank of Dallas
Contract Value, Non-Residential Building Construction: McGraw-Hill
Mortgage Foreclosures, Annual Change: RealtyTrac

Texas Production and Consumption Indicators:
Crude Oil, Natural Gas, Motor Fuels, Auto Sales, Cigarettes: Texas Comptroller of Public Accounts
Active Oil & Gas Drilling Rigs: Baker-Hughes Incorporated
Median Sale Price, Existing Single-family Home: The Real Estate Center at Texas A&M University

SUSAN COMBS
Texas Comptroller of Public Accounts

FISCAL NOTES is one of the ways the Comptroller's office strives to assist taxpayers and the people of Texas. The newsletter is a by-product of the Comptroller's constitutional responsibilities to monitor the state's economy and to estimate state government revenues.

FISCAL NOTES also provides a monthly summary of the financial statements for the State of Texas.

Articles and analysis appearing in *FISCAL NOTES* do not necessarily represent the policy or endorsement of the Texas Comptroller of Public Accounts. Space is devoted to a wide variety of topics of Texas interest and general government concern.

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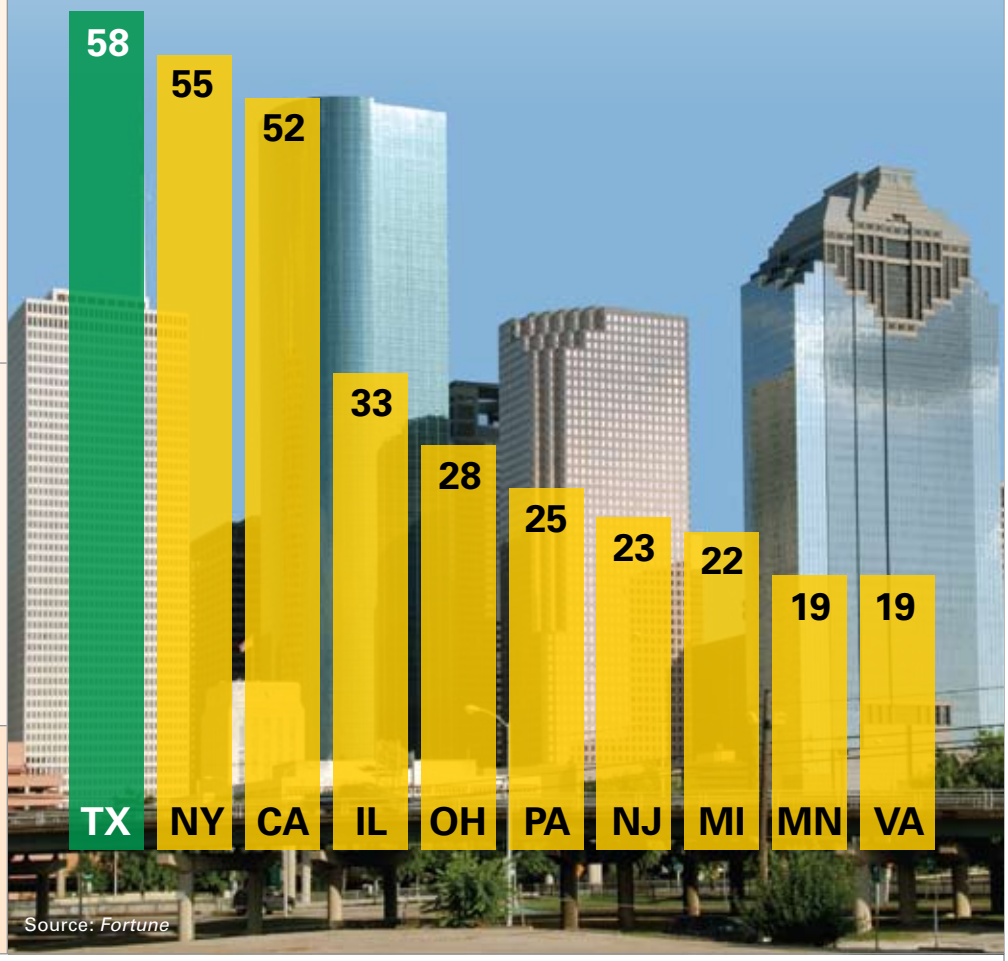
Texas: Number One for Big Business

In its May 5, 2008 issue, *Fortune* magazine revealed its newest "Fortune 500" list—an annual ranking of America's largest corporations. More Fortune 500 companies are headquartered in Texas than in any other state. Texas and New York have traded places since 2007, when New York had headquarters for 57 of these major corporations, and Texas was home to 56.

The Ten States with the Most Fortune 500 Companies, 2008



Source: *Fortune*

FISCAL NOTES
A Monthly Review of the Texas Economy from the Office of Susan Combs, Texas Comptroller of Public Accounts

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